

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022454**Date Inspected:** 30-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Gang Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance(QA) Inspector Mr.Shrikant Utekar was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. The QA Inspector observed and/or found the following:

BAY # 14

**ULTRASONIC TESTING**

ZPMC NWIT No: 08671

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the length previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an (UT) report on this date. The members are identified as OBG 14east. The weld designations are as follows:

SEG3019Z-008, 009

This QA Inspector randomly observed the following work in progress.

OBG 14EAST

**HEAT STRAIGHTENING**

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This Quality Assurance (QA) Inspector observed ZPMC personnel performing heat straightening, member identified as Anchorage plates (AP3008, AP3009). Distortion appeared to be caused by welding. Weld number identified as SEG3019BB-001, 023, 045. ZPMC Quality Control (QC) inspector identified as Mr. Zhu Yuan Yuan was present to monitor the heat straightening process. The heat straightening appeared to comply with heat straightening Report HSR1 (B)-10247.

### FLUX CORED ARC WELDING PROCESS.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067079 performing the Flux Cored Arc Welding process on weld 131 located at PCMK SEG3019J. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2233-ESAB.

This Quality Assurance (QA) Inspector observed ZPMC qualified welders 066763 and 067877 performing the Flux Cored Arc Welding process on weld 023 located at PCMK SEG3019AQ. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-ESAB.

### SHIELDED METAL ARC WELDING PROCESS.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 058087 performing the Shielded Metal Arc Welding process on weld 001 located at PCMK SEG3019BB. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 201087 performing the Shielded Metal Arc Welding process on weld 023 located at PCMK SEG3019BB. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067571 performing the Shielded Metal Arc Welding process on weld 067 located at PCMK SEG3019BB. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 043661 performing the Shielded Metal Arc Welding process on weld 111 located at PCMK SEG3019BB. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welders 037932 and 037723 performing the Shielded Metal Arc Welding process on weld 009 located at PCMK SEG3019B. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

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This Quality Assurance (QA) Inspector observed ZPMC qualified welder 068764 performing the Shielded Metal Arc Welding process on weld 008 located at PCMK SEG3019B. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 044772 performing the Shielded Metal Arc Welding process on weld 001 located at PCMK SEG3019U. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2214-Tc-u4b-Fcm-1.

### CRITICAL WELD REPAIR

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066418 performing the Shielded Metal Arc Welding process on weld 003 located at PCMK SEG3019U. ZPMC QC Mr. Zhu Yuan Yuan was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-2G (2F)-Fcm-Repair-1. Critical weld repair report identified as B-CWR2822.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

No significant conversations were reported on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Utekar,Shrikant

Quality Assurance Inspector

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**Reviewed By:** Patterson,Rodney

QA Reviewer